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ORIGINAL DEPARTMENT.

LECTURES.

Lectures on Orthopædic Surgery.

Delivered at the Brooklyn Medical and Surgical Institute.

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IV.—*Deformities of the Spine.*

Gentlemen, the spinal column is, both in an anatomical and mechanical point of view, a wonderful construction. In adults it consists of twenty-four single bones (vertebræ) united in continuous columns by twenty-three intervertebral fibro-cartilages. These endow the spine with a high degree of flexibility, constrained, however, by the shape of the individual vertebræ and their strong ligamentous apparatus. The intervertebral disk, being very elastic and increasing in thickness toward the base of the spinal column, are eminently qualified to break the violence of mechanical influences. In this the cartilages are greatly aided by the natural curves which the spine of a full-grown man presents. Prof. Weber* has most accurately ascertained the physiological deviation of the spine from the perpendicular. After having prepared the subjects by removing the thoracic and abdominal organs, and filling the cavities with a solution of plaster of Paris, he divided the spinal column with the plaster mould longitudinally, and by this process preserved its correct position. The result of the measurement may be briefly stated as follows: Atlas and centre of sacro-vertebral articulation conform with the perpendicular. The centres of the second and third cervical and fourth and fifth lumbar vertebræ slightly project from the perpendicular, whereas the rest recede. The greatest tension of the curve lies at the sixth and seventh thoracic vertebræ, whose distance from the perpendicular amounts to 2·750." The first and last thoracic vertebræ occupy the same position to the perpendicular—namely, 1·400". From these researches it is obvious that when viewed in the profile, the spinal column presents three curves —two small ones anteriorly at its cervical and lumbar portion and a large posterior one. Rollin and Magendie have asserted that the threefold curves of the spine increased its mechanical strength sixteen times. But this is certainly an error, and against all mechanical laws. On the contrary, the curves obviously weaken its physical strength, and the most powerful musculature is necessary to sustain its firmness in the erect posture. The curves, on the other hand, render the spine more endurable to violence that may bear upon it from above or by contre-coup, which would certainly crush a straight one. Besides, space is thus provided for the suspension and protection of vital organs. The oval form of the vertebral bodies subserve the same mechanical purposes as the round form, yet leave more space in front and behind. The cancellated structure is likewise better adapted to the vertebral bodies, being lighter and less frail than the compact osseous substance, though the latter would bear more weight.

E. H. Weber* has acquainted us with the relative part the vertebræ or cartilages have in the formation of the spinal curves.

The subjoined table exhibits the proportionate thickness of either. The first column states the number of the vertebra and inververtebral cartilage; the second, the middle size of the vertebra; the third, middle thickness of the cartilage; the fourth, the difference between the anterior and

* Mechanic der Menschlichen Gehwerkzeuge. Göttingen, 1836.

* Merkel's Archiv, 1827.

posterior height of the vertebra; the fifth, the same difference of the intervertebral cartilages; the sixth, in fine, the middle diameter of the latter. The + and — indicate excess and deficiency.

1		2	3	4	5	6
Cervical.	1	0·00	0·00	0·0	0·0	0·0
	2	31·50	2·70	+3·0	+0·6	14·7
	3	13·20	3·55	+0·8	+0·1	14·9
	4	13·05	2·65	—0·1	+1·3	14·2
	5	13·10	3·75	—0·6	+1·5	15·1
	6	12·00	4·60	—1·0	+1·2	15·9
	7	13·00	3·45	—0·8	+0·1	15·2
		95·85	20·70	+1·3	+7·8	
Dorsal.	1	16·80		—1·0	+0·8	17·0
	2	18·60	3·40			19·8
	3	18·50	3·15	—0·0	—1·3	21·3
	4	19·20	2·40	—2·0	—1·2	21·9
	5	19·85	1·90	—1·9	—1·8	20·4
	6	19·40	2·15	—2·0	—0·7	27·5
	7	19·50	3·10	—2·4	—1·4	28·5
	8	20·45	3·15	—1·5	—1·3	27·8
	9	20·45	4·30	+0·3	—1·2	28·0
	10	23·20	3·20	—0·6	—1·2	28·8
	11	23·20	2·50	—1·4	—0·6	
	12	23·80	5·65	—1·0	+0·7	
		242·95	34·90	—13·3		
Lumbar.	1	26·50	4·70		+2·0	27·9
	2	28·15	4·85	—0·8	+2·1	29·1
	3	28·15	6·90	—1·1		29·1
	4	26·75	6·85	+0·7	+2·2	29·3
	5	26·30	8·65	+1·7	+3·3	29·5
				+6·2	+2·3	27·7
			10·90		+9·2	
		135·95	42·85	+6·7	+21·1	

In comparing the results of the fourth and fifth columns, we find that at no part of the spine are the anterior and posterior height of the vertebral or intervertebral cartilages the same, and that the difference in their thickness is the cause of the respective curves. It is also evident that the cervical and lumbar curves are chiefly formed by the cartilages, whereas the thoracic curve depends mainly on the form of the respective vertebræ themselves.

Although the elasticity of the intervertebral cartilages is great, yet it does not entirely accord with the elasticity of unorganized substances. Thus for instance, the cartilages do not possess the power to resume their full height after compression. Hence the body, in the erect posture, loses about one inch in the course of one day, and requires the horizontal posture for six to eight hours to regain its full height.

This physical condition of the intervertebral substance is no doubt operative in the establishment of distortion of the spine.

In the preceding remarks, we have dealt with the spine of adults; but its anatomico-mechanical structure in infants and children differs widely from that of adults. The ossification of the spine in the embryo appears later than in almost any other bone of the skeleton; the anatomical perfection requires likewise more time, and exceeds the period of puberty by years. During all that time some parts of the vertebræ are connected with the bodies by cartilages, and, consequently, they are much more easily disconnected by traumatic causes than if the vertebræ were entire. This anatomical status renders the spine as a whole much more flexible than that of adults. In fine, there are *no physiological curves in the spine of infants*, and they develop themselves very slowly, so that they are scarcely established to their full extent at puberty. This should be borne in mind, because it accounts for the greater susceptibility to spinal deformities in childhood.

To all appearance the spine is a mechanical apparatus of great physical strength, and certainly well calculated to fulfill the offices which nature has designed for it. By constant physical training, its mobility may not only be increased, but greatly extended beyond the ordinary anatomical limits, which can be observed in the feats of gymnasts. Not every spine can bear, however, such distortions without injury, and it would seem that they are much more easily produced than has been hitherto supposed. The experiments of the late Professor Bonnet, of Lyons, render this almost conclusive. He succeeded in producing upon the spine and its components, with comparative little physical violence, any injury, from the rupture of ligaments and muscles to dislocation and fracture of the vertebræ. In the spine of children this would be much more easy than in adults, to which the experiments of Bonnet seemed to have been restricted. Nor can there be any doubt that fractures of the spine occur more frequently during life than is generally believed, for the Museum of the Royal College of Surgeons, England, the Musée Dupuytren, and other private collections, contain specimens to that effect. In some of them the diagnosis was made ten or more years after the accident, and in some post mortem.*

* Beiträge zur vergleichen der Anatomie der Gelenkkrankheiten van Dr. Gurlt. Berlin, 1853.

Posterior Curvature of the Spine (Kyphosis Gibbus.)

This deformity was not only known by Hippocrates, but its cause was definitely attributed to tubercle "within and without the lungs." Galen employed the same term. Guillot and Nélaton are of the opinion that the pathological knowledge of tuberculosis can be distinctly traced to the ancients. However this may be, it is equally correct that Marcus Aurelius Severin introduced the term "tubercle" in the seventeenth century, with a rather loose meaning, and Delpech gave to it its present pathological currency.

The authors who, during the seventeenth and eighteenth centuries, investigated the pathology of kyphosis, as Bonnet, Ruysh, Cooper, Pott, promulgated the idea that caries of the spine was the invariable cause of the malady, and Delpech gave it the finishing touch, in demonstrating that the caries originated in tubercular disease. This opinion met with a general acceptance, and with some surgeons it prevails to this day. In Nichet and Nélaton it found its warmest advocates.

Delpech lays down two modes of tubercular invasion. There is either a ventral deposit which grows by juxtaposition, gradually rarifying and destroying the cancellated structure of the vertebral body, until it is physically disqualified to bear the superincumbent weight. It breaks consequently down and suddenly gives rise to a posterior curvature of the spine. Or the tubercular material is deposited in front or by the side of the bodies, and gradually excavates them, until the destruction of the bone has been accomplished to the opposite wall, when the spine breaks down, and bends either posteriorly or laterally, as the case may be.

Nichet and Nélaton advert to a third mode, namely, *a general diffusion or infiltration of tubercular substance throughout the entire cancellated structure*, with subsequent absorption of the latter or the formation of a sequestrum. The intervertebral disks are but exceptional recipients of tubercular deposits. (Nichet.)

Between the views of Pott on one side, and those of Delpech, Nichet, and Nélaton on the other, there is no difference. One stands to the other in the relation as cause to effect. Kyphosis, or Pott's disease, as it is likewised called, is consequently a posterior, mostly angular curvature, initiated by tuberculosis of the spinal bodies, followed by carious destruction of their cancellated structure of which the deformity is but one of the symptoms.

With very few exceptions the foregoing opinions seem to have been adopted without question or dispute by all modern writers. It appears almost presumptuous to entertain doubts where the most positive assertions are made by surgeons of the highest repute and competency. It is but natural that we approach the subject with some timidity, yet, under the force of facts, we venture upon the criticism as an imperative necessity for the establishment of pathological truth.

Bonnet states that, however great the merits of the researches of Nichet and Nélaton on this particular subject unquestionably were, they had certainly been received with too great readiness and too little reservation. They had so much preoccupied the minds of their contemporaries as to exclude other observations equally reliable. He, for one, knew positively that other causes than tubercular deposits were prone to establish kyphosis. More recent investigations of tuberculosis have wrought very different results. The existing confidence in the prevailing views of the proximate cause and nature of tubercular matter has been seriously shaken. A complete revolution is threatened in this branch of pathology, which seemed to have been settled once forever.

First, we wish to call attention to some experiments of Cruveilhier,* seemingly the only ones bearing upon the question. He injected quicksilver into the air-passages of animals. In examining the pathological results at different stages, he elicited the following facts. An exceedingly small globule of the metal occupied an air-cell imbedded in fluid pus. At a later period this pus was semi-fluid, then of cheesy consistence, and, in fine, hard. At last it became semi-translucent.

These experiments clearly demonstrate the gradual changes which ordinary purulent matter may undergo by absorption of its liquid component. Both Rokitansky and Gurlt state, in addition, that pus may even undergo the process of calcariazation. In this respect, therefore, tubercular matter presents no marked difference from pus. Moreover, we can adduce unexceptionable pathological authorities (Reinhardt† and Le-

* Traité d'Anatom. pathol. générale. 2 vols. Paris, 1849–52.
† Annalen des Charité-Krankenh. Berlin.

bert*) that in numerous instances of pronounced tubercular deposits in bones, the microscope revealed fat and other granules, pus corpuscles and bone detritus. In some specimens Lebert found so large corpuscles that he felt unable to decide whether they were tubercles or pus. If the microscope was insufficient to determine the nature of the material, it is very evident that the naked eye is still more so. Lebert's investigations, it should be borne in mind, were carried on at a time when our knowledge of pyogenesis was embryonic; when we were as yet unacquainted with cellular bodies in the connective tissue; when we were ignorant of the fact that the formation of pus was in part only by the division of corpuscles, but in the greater part by endogenesis, as in soft cancer, by the generation and bursting of parental pus cells. It is, therefore, not unlikely, at any rate not impossible, that the large cells which Lebert was unable to determine, were the identical parental cells of pus.

In still more recent investigations by Gurlt, Bilroth, and especially by Virchow, the facts have become established in such number as to render the existence of tuberculosis almost problematical. Virchow emphatically asserts that he has never seen the *so-called tubercular cell*, and that *in the material hitherto pronounced tubercular, he has failed to recognize anything specific outside of the casual results of the inflammatory process.* In as far as the bone tubercles are concerned, the very thorough and diligent researches of Gurlt render them entirely mythical. The favorable opportunities which that inquirer enjoyed in observing the inflammatory process of bones, in both men and domestic animals, leave not a shadow of doubt that the pathological changes are anything but tubercles. *The grayish substance* with which we find the bones invaded is a soft, fatty material consisting of an exuberance of connective tissue and fat globules, with or without pus corpuscles, evidently the result of endostitis, of which the attributes are presented in the surrounding bony tissue. Of this pathological condition we have had some specimens in our hands. Next, *a purulent infiltration* of the cancellated tissue may be found; and, in fine, there is *the bone abscess*, both in the vertebral bodies and elsewhere. Of the latter, Gurlt has given us a most graphic description. If the matter collects in a circumscribed cavity of the bone, the osseous tissue forming the wall of the abscess becomes denser, a condition which has been termed sclerosis, and which is identical with the eburnated structure of John Tomes. A fine lining membrane may also be discerned. The pus contained in the abscesses is mostly of a pultaceous consistence, and sometimes concentric striata may be observed, being drier and harder toward the periphery and softer toward the centre. Gurlt is of the opinion that the change in the consistence of the pus is induced by the absorption of its serum, and the centre being the farthest from the lining membrane, remains soft for a longer period.

The numerous specimens bearing upon this point may be studied in his work on articular diseases, with great advantage.

This brief review of the subject, if it has failed to convince you of the fallacy of bone tubercle, will at least have taught you that the terms scrofulous or tubercular are too loosely and indiscriminately applied. We are aware that it is a hard task to eradicate the cherished doctrines of our preceptors. Nor may it be convenient to dispense with terms which are so serviceable in covering our pathological and therapeutic shortcomings. But the march of science should not be rendered dependent on notions, nor opposed on account of a veneration for our first instructors.

In disputing the existence of tubercular disease of the spine, we do not wish to be understood as disputing also the occurrence of caries of the spine. We only deny the tubercular cause of caries.

Admitting even for the sake of argument the existence of bone tubercle, we are still at a loss to accord them with most clinical facts. The theory of Delpech, Nichet, and Nélaton may be acceptable for some cases of posterior deformity which eventuate in lumbar and psoas abscesses, and in which the elimination of a tubercular detritus may be supposed. But in the larger number of instances we come in conflict with the established hypothesis, where no consecutive abscesses are found, and in others where caries and consecutive abscesses exist without deformity. Delpech and Nélaton distinctly state that the tubercular mass encroaches upon the cancellated structure, and thereby destroys the form of the vertebral bodies. There is but one alternative, either the tubercular substance becomes en-

* Malad. scroful. et tuberc.

cysted, and gradually undergoes calcariazation, or it softens down, and is eliminated as a foreign substance. In the former supposition we are unable to conceive a change in the form of the vertebræ; in the other, caries and consecutive abscesses are inevitable. This leaves us a large number of cases unaccounted for, which present all the variations of kyphosis, in both form and seat.

It seems, indeed, unnecessary to resort to hypothetical means in order to understand the pathology of the malady. The vertebral bodies are like the cancellated structure in general, highly vascular, and therefore susceptible to inflammation. This process in the bones, and its pathological results are at present well understood. There is not one solitary symptom or morbid change connected with the so-called Pott's disease that could not be brought in accordance with ostitis and its phases. Thus, for instance, a vertebral body may be softened down by inflammatory effusion or fatty metamorphosis, may change its form through the superincumbent weight, give rise to a gibbous, of greater or less size, and then the disease may be arrested without proceeding to the formation of an abscess; or purulent infiltration and caries may ensue. These pathological views would bring it at once within the scope of our comprehension why contusions and kindred injuries of the spine in the healthiest children gradually give rise to posterior curvatures, for which we have analogy in other spongy bones.

But, at best, to spondylitis the smaller fraction of cases can be ascribed. Rickets, periostitis of the spine, and fractures of a limited extent come in for their share. Hitherto, careful pathological records both of the spine and spinal cord are rather scanty, particularly if not suspected of disease. The technical difficulties entailed in the examination of that portion of the body no doubt account for the evident neglect. And yet, withal, a considerable number of observations of fractures of the spine have been recorded that were never diagnosed during life. We have observed one case, which, but for the indiscretion of the parents, might have come under the same category. A weakly child, about four years old, fell upon her back on the sidewalk. We saw her about half an hour after the accident, and noticed that the spinous process of the fifth thoracic vertebra was slightly projecting, and tilting upward. There was little pain attending the deformity. We were under the impression that the displacement of the bone was dependent upon the fall, and that a moderate fracture of the fifth thoracic vertebra caused the deformity. The parents most strenuously opposed the idea, the mother asserting that the projection of the spine was, to her certain knowledge, an old affair. Nor had the fall been violent enough to justify the rendered opinion. We insisted, however, on the correctness of our diagnosis, and ordered the child to be put on the back for at least three months. The inconvenience, soreness, and pain, which the patient had complained of, entirely disappeared, and, with the ease derived, the desire for locomotion returned. The supine posture could not be maintained longer than four weeks, and even during that time the patient was frequently sitting up. The parents objecting to further physical restraint, the child began to walk two months sooner than we advised. In about six weeks from that time we were again invited to see the patient, and found her suffering from intense pain in the affected part of the spine, laborious breathing, and fever. The curvature had evidently increased, the fourth and sixth thoracic vertebræ participating. The collateral symptoms indicating the formation of an abscess, we held out but little hope of recovery. In a few hours pleuritis of the left side commenced, and was rapidly followed by empyema, almost filling the cavity, displacing heart and lungs. On the fourth day the patient died, and the post mortem was granted simply for the purpose of defeating our diagnosis. The appearances fully affirmed the views we had taken of the case. *There was a fracture of very little extent of the fifth thoracic vertebra.* A wedge-shaped fragment was chipped off the anterior and inferior portion of the body, with its base connected with the next intervertebral cartilage below. The piece was still covered in part by the anterior ligament of the spine. There was evidently a sliding of the vertebra upon its lower cartilage, which thus caused the spinous process to project and tilt. At the seat of fracture there was an abscess consisting in two compartments on either side, communicating with each other through the fracture. The left one had opened in the left pleural cavity, and had given rise to the pleuritis.

The fracture was so insignificant, and so located, that it might have united without trouble, had sufficient time and rest been allowed. The deformity could scarcely have been

obviated, being the direct and inevitable consequence of the physical derangement of the spine. Even a moderate increase of the original deformity would not have been inconsistent with the healing process of the spine, by the necessary softening of the vertebra and its adjacent cartilages.

This case clearly demonstrates how susceptible to injuries the spine actually is, and it seems to corroborate the experimentative results of Bonnet. No doubt can be entertained as to the greater frequency of similar injuries, but they are rarely subject to so early a clinical examination as in the instance related.

In order to ascertain whether the vertebra, changed in the form of its body either by caries or fracture, occupies the most prominent position in the posterior curvature, Bonnet has instituted some instructive experiments, by sawing out of the body differently shaped pieces and subsequently breaking down the spine. The results thus obtained led to the conclusions:—

1. That the injured vertebra invariably presented the greatest prominence in the deformity.

2. That the deformity thus artificially produced was constantly of an angular shape.

3. That it required a far greater wedge to establish the curvature at the lumbar than at the thoracic portion of the spine, which is conclusive evidence in behalf of the opinions of E. H. Weber relative to the form of the thoracic vertebræ and the lumbar intervertebral cartilages.

There remains yet one important question to be settled with reference to the pathology of posterior curvature, namely, *whether, and to what an extent, the intervertebral cartilages partake in its establishment?* That the fibro-cartilages of the spine materially contribute to the physiological curves of the latter, cannot reasonably be doubted from the investigations of Weber. It follows, therefore, that if their shape constitutes an essential part in the form of the spine during health, it must be equally so in morbid conditions. Pathological anatomy has already removed all doubt as to this fact; for caries of the vertebræ invariably and consecutively invades the fibro-cartilaginous structure and more or less disintegrates it, although the process of disintegration, according to Toynbee, is not as rapid as in bones. The question mooted is therefore only: *whether the fibro-cartilages may become the seat of primary affection?* Most pathologists, in touching upon this point, are exceedingly reserved and disinclined to offer an opinion, and Nichet seems to be the only one to consider the fibro-cartilaginous structure susceptible to primary disease in the form of tubercular deposits. We deem it hardly worth while to dwell upon the subject, but are certainly of the opinion, derived from analogy, that the cartilaginous tissue would be the very last to be invaded by the so-called tuberculosis.

We are fully aware that cartilages in general are not pre-eminently susceptible to injuries, and that they bear a considerable amount of exciting cause without morbid reaction. The fibro-cartilaginous structure of the spinal disks seem to be possessed of a higher degree of vitality, judging from the vascular supply they receive. Considering, therefore, that the elasticity of the spine exclusively, and its flexibility, in a great measure depend on the cartilages, it is very evident that any undue tax of either must inevitably infringe upon their status and lead to structural changes. Quite a number of posterior curvatures having come under our observation, moderate in symptoms and size, and of a rounder form, our suspicion was excited with reference to the fibro-cartilages. But the opportunities for post-mortem examinations were so rare in this species of curvature, that up to the year 1854 we were left in doubt whether our suspicions had any foundation. In that year Dr. Lewis A. Sayre consulted us in the case of a young man who had during the preceding eighteen months suffered from disease of the spine and lumbar abscesses. The patient was twenty-one years of age, about six feet in height, greatly attenuated and anæmic. What attracted most our attention was the perfect straightness of the spine, of which the plaster cast now exhibited, Fig. 49, is a correct copy. The patient soon after died in uræmic convulsions induced by Bright's disease, and the pathology of the case underwent a thorough investigation, in which Prof. Alonzo Clark rendered his valuable assistance.

The specimen before you, gentlemen, very remotely exhibits the condition observed when recent. It consists of the lower portion of the spine from the fifth thoracic vertebra downward. There were large cavities between the psoas and quadratus muscles, communicating internally with some small carious excavations of the spine and externally with the sores on the back. In its passage the matter had corroded the left transverse process of the third lumbar vertebra.

This specimen was perfectly straight when removed, and its present bend has been caused by the mode of its preservation. The first striking

Fig. 49.

appearance was the unusual thickness of the fibro-cartilages, their exuberant protrusion from between the vertebræ, and their entire loss of elasticity. By a moderate longitudinal pressure, the bones were almost brought into contact, and had to be pulled asunder. There was but little difference in this respect among the different disks. While being pressed, a fatty, whitish detritus came forth, which, under the microscope, exhibited fragments of the structure, spindle-shaped cells containing granules and fat globules in abundance.

The spine itself, longitudinally divided, presented *no tubercular deposit* and but moderate hyperæmia.

On the opposite surfaces of the second and third lumbar vertebræ, there were two central excavations, corresponding in seat; a little larger in the third, with a loose sequestrum. Between these vertebræ the cartilage was almost entirely destroyed, the anterior lamina only being left. On the inferior surface of the fourth thoracic vertebræ, there was likewise a central carious excavation of small size, and surrounded by that dense osseous tissue which, you recollect, passes by the appellation of sclerosis or eburnated structure. In this specimen it can still be seen, the cartilage protruding and filling the said cavity.

Now you notice that in the specimen before you, there are but four carious places, namely, at the fourth thoracic, second and third lumbar vertebral bodies, and the left transverse process of third lumbar vertebræ, whereas the rest of vertebræ is perfectly sound. But one intervertebral cartilage (between the second and third lumbar vertebræ) has been destroyed, while the others have not lost in substance; on the contrary, they appear thicker.

Now, gentlemen, it is very evident that the caries of the three named vertebræ have not caused the disease of all the intervertebral cartilages, and especially not of those that occupy a seat remote from the respective bone diseases. This would be barely impossible. But is it equally impossible that the disease of the three vertebræ originated in the cartilages? We think not! and for the following reasons:—

1st. All the intervertebral cartilages are seriously affected, and have suffered structural changes, whereas but three of the vertebral bones exhibit disease.

2d. The disease of the latter is located at the surfaces which are in close anatomical connection with the intervertebral cartilages.

3d. The disease of the osseous structure is evidently proceeding from the periphery toward the centre, taking the sclerotic tissue in proof.

4th. Comparing the morbid condition of the cartilages with that of the vertebræ, and bearing in mind, what Toynbee has observed, that the former disintegrate with less rapidity than the latter, it must be conceded that the pathological changes are not only more extended, but also farther advanced in the cartilages than in the bone.

We feel therefore justified in inferring that in this specimen there is primitive disease of the fibro-cartilages, with consecutive caries of the fourth thoracic, second and third lumbar vertebræ. Nor can it be doubted that the disease consists in inflammation. The absence of the ordinary inflammatory products is by no means incompatible with this diagnosis, in as far as the modus of nutrition would necessarily modify the inflammatory process. This view is moreover strengthened by the cause of the malady, namely, over-exertion and fall.

Permit me, gentlemen, to ask your particular attention to the physical effects of the disease, namely, the *entire loss of elasticity* of the cartilages. The perfect absence of all elasticity

accounts readily for the *straight deformity* which the spine presents, having simply been occasioned by the supine posture continued during eighteen months on a hard and even mattress. Supposing the patient had walked about with this state of his spine, what would have been the result? Unquestionably a posterior deformity! For a spine that yielded its form to comparatively a few pounds of dead weight in the supine posture would have equally yielded to the greater superincumbent weight in the erect posture.

This point is of invaluable practical importance for the treatment of posterior curvature, and we are not aware that it has, by any previous record, been put in the same high relief.

To be continued.

COMMUNICATIONS.

Toxicology.

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Poisoning results not only from substances taken into the stomach, but also and still oftener by deadly influences operating in the lungs, or received into the system by means of the skin.

All extraneous matter that becomes mingled with the pure atmosphere, or any decomposition of the same, causes an irrespirable air. This may be shown variously: for instance, suicides are frequently accomplished, especially in France, by the burning of charcoal in a small room, whereby the air becomes vitiated.

Cases of murder are on record, where death has been produced on persons sleeping in contracted dormitories by the closing of all apertures for ventilation. An instance occurs to us of an angry ship's mate who killed his master, with his wife and four children, in this manner, while they were asleep in a small cabin.

In medical practice the use of anæsthetics and medicated-vapor inhalation has not infrequently produced death, or worked with poisonous effects upon the system. A word here in passing in regard to the use of the last named so-called remedial agent. It appears obvious that if anything could be devised that might be efficacious for diseased lungs, it certainly never would reach the desired place by inhalation, for the reason that when the lungs are abnormal the bronchial tubes are closed up with mucus, just as the nostrils are in the case of cold in the head; in which case the healthy portion of the lungs has to perform the functions of the whole lungs, and in the process of inhaling a medicated vapor designed, but ineffectual, for the *sick* lung, it also becomes weakened and diseased, being robbed of that vital agent, God's pure unmixed air, prepared and fitted so beautifully for the human lungs, and as essential to their proper working as water for the locomotive.

Through ignorance of the simplest, but at the same time a most important law of nature, a process of slow poisoning is continually going on in the case of infants, in which the mothers themselves are the poisoners. The almost idolatry with which many mothers regard their little ones induces them to hang over them and fondle them almost incessantly; holding them face to face, and even at night the baby often lies on the same pillow. Thus in all these ways the exhaled, dead, carbonated air from the lungs of the mother passes over to the child, whose rapidly developing organs require every particle of the purest atmosphere that can gain contact with its little body. In a measure also the breath of the child so incessantly inhaled injures the mother. Thus we often find that the infants of the poor and more industrious classes are healthier and better developed than the children of the rich; for the reason mainly that they are left more to themselves, and so nature has a better chance to do her own work of developing, etc. thoroughly.

All ill ventilated rooms, and rooms where too many live together, oftentimes crowded schoolrooms, etc. are fatal to health, and too frequently to life itself. The dry and heated atmosphere existing so generally in houses warmed by a furnace, "that horrible Borgia in the cellar," as it has been aptly styled, is sure in time to undermine the health by its poisonous influences.

Application of poisons upon the skin, or under the epidermis, arrow-poisoning, bites and stings of insects, reptiles, animals, etc. etc. can and often do prove fatal.

Having now considered the three different forms of poisoning, by which the deadly agent operates upon the system to destroy its vitality, viz., by the stomach, through the lungs, and by way of the skin, a few remarks on the general mode of treatment to be observed in said cases may be interesting.

The discharging of poisons (venena) from the system, or the preventing of their absorption, can

be accomplished in various ways: by pressing; washing; drawing by means of cups; the application of ligatures above the affected parts, like the bandage commonly used in venesection; by cutting out the injured or wounded part; by cauterization, moxa, cauterium actuale et potentiale. If the poison has entered into internal parts, such as the mouth, throat, œsophagus, aspera arteria, lungs, stomach, intestines, bladder, or vagina, the treatment must be such as is best adapted to work upon these different localities. To discharge poisonous matter from the stomach, an emetic or stomach-pump may be used. Emetics are especially efficacious when given very speedily after the poison has been swallowed. The action of an emetic is twofold, as it operates to clear out the stomach of its contents, and produces a certain action of the skin, operating as an excellent diaphoretic. Emetics should in no case be administered where evidences of gastro-enteritis are manifest, or when already symptomatic vomiting exists.

In cases of poisoning by mineral acids or by strong vegetable acids, emetics are not required, but diluted alkalies are demanded; so also when caustic alkalies have been taken, diluted acid is used for neutralizing the same. When the poison taken belongs to the venena acria, such as arsenic and sublimatum, an emetic of pulvis ipecacuanha should be given, one scruple pro dosis, every five minutes, to be repeated three or four times; at the same time should be drunk plenty of cold milk and water, white of eggs mixed with water, or sugar and water in good quantity, so as to wash the stomach thoroughly out.

When the poison belongs to the narcotica tetanica, such as strychnine, then stronger working emetics are required; for instance, zinci sulphas, to be given one scruple pro dosis, two or three times, dissolved in water; also cupri sulphas in a powder of five grains, every five minutes, to be repeated two or three times, at the same time drinking freely of cold water, or, better still, cold tea.

When emetics, such as the above named, are not at hand, may be used instead a teaspoonful of snuff, mixed with wine or water, or two teaspoonsful of mustard powder, mixed in warm water.

When at any time it is not practicable to pass anything through the mouth, a syringe may be used with a tube so bent as to pass through the nose into the œsophagus.

Occasion for the use of the stomach-pump has its peculiar indications and contraindications. It is not only used for pumping or sucking out, but also for injecting, washing, diluting and neutralizing. Indications for the use of the stomach-pump, above all other remedies, are when the patient is in a state of insensibility or sopor, unable to swallow anything in short, which is common as the result of narcotic, alcoholic, and prussic acid intoxication. When by excessive drinking, especially of beer, the stomach becomes so much distended as to have lost its power of contraction.

We know of a case where a man had thus drunk beer to excess, so that he could not contain another drop, the warmth of his body caused an expansion of the fluid. Emetics were powerless, there was no room for them to work; the stomach had moreover lost its contractibility; inflammation set in, and the man was soon dead. Now, had the stomach-pump been promptly applied in this case, and the stomach discharged of its troublesome burden of fluids, a life might have been saved.

The double stomach-pump of Weis or Charrière may be recommended as being the most simple and easy of application.

To be continued.

Case of Ununited Fracture of the Lower Maxilla successfully treated by Silver Ligatures.

By E. S. Cooper, A.M., M.D.,

Professor of Anatomy and Surgery in the Medical Department of the University of the Pacific, San Francisco, California.

Mr. M. H., an Englishman by birth, a laboring man, of good constitution and temperate habits, admitted into the Pacific Clinical Infirmary, June 12th, 1861, in consequence of an ununited fracture of the lower jaw of four months' standing. The case had been under the care of a skillful practitioner, and why a bony union did not take place it is impossible to say. The fragments would move beyond each other when a little force was used, but when left alone they assumed a natural position, the teeth on either side of the fracture suiting each other exactly.

Operation.—An incision was made in the centre of the lower lip, dividing the soft parts to a little below the lower margin of the jaw. The bony structure in the region of the fracture was laid bare with the bone chisel, by peeling off the soft parts, in accordance with my usual plan in

operations where the bones have to be exposed. This is effected in the following manner: the edge of the chisel is pushed along from the place of incision close to the bone, separating the soft parts from it, care being taken not to let the instrument slip into the surrounding tissues, by which some blood-vessel or nerve of importance might be wounded. I would recommend this method of exposing the bone as being altogether superior to that ordinarily pursued. By it there is little difficulty in separating the soft tissues from the bone at whatever point it is attempted. Even the breaking up of attachments between the adductor magnus and os femoris, at the point where the femoral artery perforates its tendon within six lines of the bone, can be readily effected.

The fragments of the ununited fracture being exposed where they come together, a careful examination was made to see if any evidence of disease of bone existed, but none being found, the adventitious soft tissues connecting the two extremities of bone were removed, so that two bony surfaces might come together, for the purpose of producing ossific union. The extremities were then drilled in two places, and silver ligatures introduced, the ends of which were tightly twisted together over the fracture so as to form firm knots. The drill was one line in diameter, and the ligatures as large as could conveniently be introduced. The ligatures were placed, one at the upper, and one at the lower margins of the jaw. The ends of the ligatures were cut off near the bone, with the view of permitting them to remain permanently. The dressing, however, was so arranged that they could be cut and removed, should it become necessary — the periosteum being removed from a small space, either because it was diseased, and slipped off readily, or because I pressed it too hard with the chisel. The portion of bone thus exposed was left uncovered by the tissues for the permitting any portion of bone that might exfoliate to pass off. The wound was dressed in the following manner: A piece of lint was placed in the bottom of the wound longitudinally with the incision, one end as high as the teeth, and the other permitted to hang out of the wound below. Two stitches were then taken to bring the margins of the wound together over the lint. Adhesive plaster was applied. The lint was wet in an evaporating lotion, composed of one part of alcohol, and ten of water.

June 21st.—The patient is very well; has suffered no constitutional irritation, and very little pain, sleeps and eats well, can move the jaw regularly, and with a freedom that could not be permitted patients with fractured jaw, in whom the silver wire had not been used.

July 5th.—Saw the wound to-day, with bandaging all off. The jaw is firm, the contour of the teeth almost perfect. The patient can open the mouth with great freedom. The front part of the wound healed by first intention, but a bit of lint was still retained in the lower portion of the wound communicating with the bone. Two or three little abscesses were formed along the lower margin of the jaw near the angle.

October 9th.—The patient at his home in the country was attended by a medical friend of mine, who removed the ligatures, and informs me that the cure is perfect. Small pieces of bone exfoliated and were thrown off about the time the ligatures were removed, after which the wound healed slowly by granulation.

Illustrations of Hospital Practice.

VERMONT MEDICAL COLLEGE.

Service of Professor Conant.

Reported by W. L. Kendrick, M.D., Prosector.

May 28th.

Case 1. *Fracture of the Patella.*—This patient met with the accident by which this injury was inflicted some six weeks ago. Various apparatus have been invented for the treatment, but the adhesive plaster, as applied in this case, is perhaps the most satisfactory, with a straight splint behind. The plasters are applied so as to antagonize the extensor muscles of the leg—the chief object being to overcome the tendency of the quadriceps extensor muscle to contract and draw up the upper fragment of the bone. The adhesive plasters are well applied and answer the purpose admirably.

Case 2. *Gunshot Wound.*—This patient was wounded at Drainsville, December last. The ball shattered all the metacarpal bones of the right hand. The outer half of the hand has already been amputated, and the two small ulcers on the remaining portion of the hand are of that peculiar kind indicating disease of the bones beneath. Portions of the metacarpal bones of the index and middle fingers are ulcerating their way through at the joints. Surgical assistance recommended.

Case 3. *Fissure of the Palate; Staphyloraphy.*—This young lady was operated upon last year, but ulceration of the fauces separated the

parts after union had taken place. The operation was again performed on Wednesday last. The soft parts were dissected up from the bony base and brought very neatly and perfectly together by the following method: 1st. The outside incisions were made so that the tensor palati muscles and the mucous membrane at the sides should not hold the flaps apart. 2d. The flaps were dissected up and detached from the alveolar and palatine processes of the superior maxillary bones. 3d. The border of the flaps were vivified; after which four interrupted sutures of very narrow bobbin were introduced, well waxed and tied firmly so as to close perfectly the entire fissure; and up to to-day there is not the slightest tendency to separate. This operation occupied one hour and a quarter, most of which was spent in waiting for the hemorrhage to cease. The patient during the whole time remained perfectly quiet, and bore the operation with a fortitude seldom witnessed.

CASE 5. *Obliteration of the Urethra with Perineal Fistula.*—This man was injured last August by falling astride a piece of joist. The urethra was cut entirely off, the urine producing a perineal fistula. He was operated upon at the last clinic. Chloroform was administered and the operation by perineal section was performed. He returns to-day wearing the large catheter without trouble. The wound is rapidly healing.

CASE 7. *Strumous Corneitis in a girl seven years old.*—This patient was brought to the clinic some ten days since, with almost complete opacity of the cornea of the right eye. A mild astringent collyrium was prescribed. The patient returns to-day able to see with the eye, which was nearly blind before. She continues the collyrium and the use of constitutional remedies.

CASE 8. *Hypertrophy of the Tonsils.*—This patient was a young girl from Charlotte, about ten years old. The tonsil on the right side was so enlarged as to affect her speech. It was removed in a very few seconds by means of the tonsillotome, by Dr. C., with little pain to the patient. Dr. C. remarked, when a tonsil becomes diseased so as to vitiate its secretion, it is better for the patient to have it removed.

CASE 9. *Anchylosis of the Ulna at the Elbow, with a Dislocation of the Radius backward.*—This is a case of fourteen months' standing in a lady thirty-five years old. This patient met with an accident by which she had some injury of the arm. The arm being dressed perfectly straight, passive motion was not kept up, and anchylosis was the result. Ether was administered at the last clinic, and the adhesions broken up. If she does not recover the perfect use of her arm, she will find it much more serviceable than if it had remained perfectly straight. But she returns to-day; the radius is gradually resuming its natural position, and considerable motion is perceptible. Ether was again administered and the adhesions loosened up. The case is progressing very favorably.

CASE 10. *Pott's Disease of the Spine, with a very great Deformity in the Dorsal Region, in a man some thirty years of age.*—This patient was before the clinic, two years ago, with partial paralysis of the lower extremities. Mechanical support and constitutional remedies were recommended, which have made him very comfortable up to the present time. The patient feels certain that the paralysis is again threatened. The same treatment again recommended.

CASE 11. *Fissure of the Palate; Staphyloraphy.*—This patient is a young man about twenty years old. The case being a similar one to Case 3, the same operation was performed. The tensor palati muscles being so well developed in this case, it made the operation more difficult, and required more time. The parts were brought together and the fissure entirely closed.

CASE 12. *Vascular Tumor of the Neck.*—The patient, an elderly gentleman some sixty-five years of age, had a tumor appear on the right side of the neck some four years since, which had been gradually increasing till some six months since, when it began to grow more rapidly and has nearly doubled in size during that time. When he presented himself at the clinic the tumor reached from the arteria innominata to the bifurcation of the common carotid artery, being some six inches long and four inches deep, lying directly upon the large vessels of the neck, so that the pulsations of the common carotid could be distinctly felt through the tumor.

The chances of an operation were freely canvassed, and the patient made aware of the conclusions, when it was left entirely for him to decide if he would prefer the chances of an operation or allow the tumor to remain, which would in a few months terminate his life in all probability. He decided to take the chances of an operation.

Ether was administered by Dr. Hall, of Swanton, his family physician, and the operation completed by Dr. C. in thirteen minutes. The hemorrhage was considerable, but not enough to endanger life, and the patient has now gone on comfortably nearly three days.

The tumor proved, upon microscopical examination by Prof. Stiles, to be disease of a lymphatic gland, precisely as diagnosticated before the operation, and containing some calcareous deposits in its structure.

The Beach Street Museum building has recently been opened by the United States authorities in this city, and the medical charge is under the Surgeon-General of this State, for the temporary accommodation of the sick and wounded. The beautiful grounds of the Massachusetts Hospital are now studded with hospital tents, and everything is ready for the reception of the sick. We are glad to add that in this city everything works systematically and harmoniously, and there is no clashing of interests.—*Boston Med. and Surg. Journal.*

Medical Societies.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

The Medical Society of the State of Pennsylvania assembled Wednesday morning, at 11 o'clock, in the hall of the Medical Department of the University of Pennsylvania, Dr. E. Wallace, of Berks, President, in the chair; Drs. Bell, of Philadelphia, and Allison, of Beaver, Vice-Presidents; Dr. J. Henry Smaltz, Secretary.

Dr. Condie, in behalf of the Philadelphia County Society, opened the proceedings with an address of welcome to the society.

He said there was, perhaps, no profession like the medical, in which the free interchange of opinion and personal experience is productive of such good. To this we are indebted for that equalization of knowledge which is so essential. The physicians of Pennsylvania have failed to secure, as a body, a due appreciation of the education, talent, and skill among them, from the fact that they have neglected to contribute their full quota to the general fund of medical knowledge, and withheld their aid from efforts to elevate the standing of the medical profession. In conclusion, he hoped that, with a return of peace and prosperity to our country, the progress of the Society would be steadily advanced, and that each time they met there might be manifested an increased zeal in behalf of medical organization in every part of Pennsylvania.

On motion of Dr. Condie, the chairman appointed Dr. Nebinger, of Philadelphia, Dr. Ulrick, of Berks, and Dr. Schrack, of Montgomery, Committee on Credentials.

On motion of Dr. Gross, it was resolved that the surgeons of the army and navy in this city, or temporarily sojourning among us, also the physicians of neighboring States, and Dr. John L. Atlee, of Lancaster, be invited to seats on the floor of the convention, and to a participation in the deliberations of the Society.

Dr. Condie, on behalf of the censors, reported that a new society had been formed in Luzerne County.

On motion of Dr. Horton, of Bradford, it was resolved that the address of welcome of Dr. Condie be published with the Transactions.

Dr. Nebinger, on behalf of the Committee on Credentials, reported the following list of delegates:—

Drs. G. W. Allison, J. Winans, of Beaver County; E. Wallace, Ulrick, Berks; G. F. Horton, Bradford; J. Dyer, Bucks; J. Brooke, A. Murphy, Chester; M. Emanuel, Delaware; C. R, Early, Elk; J. B. Luden, Huntingdon; W. Anderson, Indiana; C. Mair, Luzerne; J. J. Comfort, John Schrack, Montgomery; Jas. Galbrath, J. Swartz, Perry; J. Ramsey, W. H. McGill, Susquehanna; J. J. Stevenson, Westmoreland; Drs. D. F. Condie, Chairman, H. St. Clair Ash, W. B. Atkinson, W. L. Atlee, F. Bache, John Bell, J. Brookfield, Joseph Carson, B. H. Coates, James M. Corse, L. Curtis, Wm. Darrach, Gov. Emerson, A. H. Fish, A. Fricke, D. Gilbert, S. D. Gross, A. Hartshorne, N. L. Hatfield, A. Heifenstein, William Hunt, Wilson Jewell, Wm. N. Johnson, A. L. Kennedy, Wm. L. Knight, John F. Lamb, Joseph Leidy, Wm. Mayburry, J. Cheston Morris, A. Nebinger, A. Stillé, Winthrop Sargent, J. Henry Smaltz, H. H. Smith, Lewis S. Somers, A. Owen Stillé, W. D. Stroud, Robert P. Thomas, J. J. Woodward, J. H. Worthington, Philadelphia.

The committee also recommended that Dr. J. B. Luden, of Huntingdon, who was present without credentials, also Drs. C. R. Early, of Elk, and J. Dyer, of Bucks, in which no societies existed, and also Dr. W. H. McGill, President of Susquehanna Medical Society, at Montour, be invited to take seats as delegates. Agreed to.

In accordance with the annual custom of the Society, the President then delivered his address, an abstract of which we give.

Gentlemen of the State Medical Society—Before proceeding to the discharge of the duty which custom, enforced by a recent enactment of this Society, makes obligatory upon me, permit me to congratulate you upon the bright and auspicious circumstances under which we have assembled here to-day. Twelve months since the regular annual session of this Society was postponed in consequence of the distracted condition of the country, growing out of the most wicked and unnatural rebellion the world has ever witnessed. The gloom and despondency which then pervaded the entire community have been happily dispelled, and to-day, though we may not rejoice in the blessings of peace and prosperity once enjoyed but so inadequately appreciated, we can indulge the confident assurance that the issue of this struggle is no longer doubtful; that the stars and stripes will ere long be unfurled in the capital of every State, and that at no distant period there will be found in every part of the land loyal hearts to respond to the sentiment, "Liberty and Union, now and forever, one and inseparable." [Applause.]

In the winter of 1848, gentlemen connected with the medical societies of Chester and Lancaster, inspired by a love for their profession, and anxious to promote its interests, adopted measures for the organization of the State Medical Society, whose anniversary we now celebrate.

The necessity for such an organization as the State Medical Society was never questioned, and the profession expected from it results most satisfactory and complete. These have not been realized. Various reasons have been assigned for the apathy manifested on the subject, but we must reluctantly conclude that the want of success is owing in a great measure to the character of the material composing the profession. Many young men enter it with greatly mistaken views of the obligations, and of their own fitness. This is due in part to the inducements held out by their preceptors, as well as the facility with which a degree can be obtained from many of the medical schools. The prevailing public opinion, that when unfitted for the other learned professions a young man is abundantly qualified for the practice of medicine, is pernicious and often leads to unfortunate results. The possession of a medical degree makes no one a gentleman or a scholar; and deprived of the characteristics of these, no man is fitted rightly to discharge the obligations incident to his professional career.

To this cause is owing much of the jealousies and bickerings which so distract and disgrace the profession, are so often the occasion of that want of harmony which should characterize a benevolent calling, and to which must be ascribed many of the impediments in the progress of the society. It were folly to disguise the fact that there are many in the profession utterly unworthy of its honors, their object being not the advancement of science, or the good of mankind, but their own interests. This is to be remedied by promoting a higher standard of medical character. In thus protecting itself against unworthy membership the profession will guard its own interests, and when it can secure its own self-respect it may reasonably anticipate the respect and confidence of the public. Until then, the profession must acknowledge their lack of courage to meet a difficulty which they alone can successfully encounter.

It cannot have escaped the most careless observer that on the subject of medicine a large portion of the community will be humbugged, and not a few wearing the insignia of the profession (to their shame be it spoken) avail themselves of this weakness of the public to reap the rich rewards of its credulity. Men intelligent upon other subjects seem in this instance to set aside the dictates of common sense, and the ordinary rules by which they are governed in the affairs of life, to give full play to a distempered imagination. There is no absurdity so monstrous as not to find its ready dupes—no conceivable folly that has not its deluded victims. True as this is of the community as a whole, it is perhaps not less applicable to the clergy as a class. Possessing intelligence of no ordinary character, and influenced in their conduct, as we believe, by correct principles, it is not a little singular that the cause of error should so often find in them its warmest friends and advocates. To this general charge there are, I am happy to say, very many honorable exceptions—men who despise quackery, however specious the guise it may wear, and who would not degrade themselves or their holy calling by contact with it. But it cannot be denied of a large number that their influence is exerted *against rational medicine*, and in favor of whatever will impede its progress.

We are accustomed to regard the vocation of the physician as one of immense responsibility; and however great his advantages, or whatever may be his qualifications, he cannot but feel, at times, the weight of that responsibility, if he be not led to exclaim, "Who is sufficient for these things?"

To him are committed the issues of life and death, and on the propriety of the course he adopts will often depend consequences which eternity alone can properly estimate.

Who can calculate the amount of mischief that is done by the fraudulent certificates with which the land is flooded, and in which the most monstrous perversions of truth are propagated?

And who so ready to affix their signatures thereto as gentlemen of the clerical profession?

Can it be that there is no moral responsibility attached to an act by which such immense mischief is often accomplished?

Can the desire to do good or relieve suffering be a sufficient apology for results so frequently disastrous in their consequences?

In the language of another, "How long will it take mankind to learn that while they listen to 'the speaking hundreds and units' who make the world ring with the pretended triumphs they have witnessed, the dumb millions of deluded and injured victims are paying the daily forfeit of their misplaced confidence?"

Religion should ever be the handmaid of science, deriving, as it often does, from the latter the most important aid in unraveling its mysteries.

That those engaged in inculcating its holy precepts should mistake their duty and cast their influence in the scale of error, is a problem of no easy solution; and while we may concede honesty of purpose and purity of intention in so doing, we but compliment the heart at the expense of the head.

Of a kindred character is the practice so often pursued by the editors of religious newspapers in giving circulation to the advertisements of nostrum venders, and in many instances puffing them into notice. That the secular press of the day, influenced by the love of gain, should pursue such a course is not so much to be wondered at; though a regard to decency and the morals of their readers ought to exclude from publication many advertisements now having a wide circulation. But where the dissemination of truth is the professed object, we do not expect to find columns filled with the most unblushing falsehoods in respect to the wonderful powers of some of these remedies. Professing to cure with unerring certainty "all the ills to which flesh is heir," they cannot but deceive a class of readers wholly incapacitated to judge of their merits, and who naturally desire to be free from existing maladies.

Many a life is sacrificed to the simple delay occasioned by the use of these means at a time when efficient remedies should have been employed. How far a man becomes *particeps criminis* to the wrong inflicted in such a case is a question which might well be pondered by those implicated in the transaction.

In making these strictures, I desire not to be misunderstood. For religion itself I entertain the most profound respect, and among its authorized teachers I am happy to number many valuable friends. A sense of duty, rather than a desire to censure, has prompted these remarks, embodying sentiments which I have long since entertained, and which, if I mistake not, will find a hearty response in the profession generally.

The thanks of the Society were tendered to the President, and a copy of his address was requested for publication.

The Treasurer, R. P. Thomas, submitted his accounts. The balance on hand June 13, 1860, and moneys received since, amount to $354 55; the expenditures during the same period amount to $352 04; leaving a balance of $2 51. The following societies are in arrears: Blair, Cambria, Carbon, Huntingdon, Lebanon, Perry, Schuylkill, and Washington. Total amount of arrearages, $102 50.

Since the organization of this body, in 1848, there have been associated with it societies in Alleghany, Beaver, Berks, Blair, Bradford, Bucks, Cambria, Carbon, Chester, Columbia, Delaware, Erie, Franklin, Huntingdon, Lancaster, Lawrence, Lebanon, Lehigh, Lycoming, Mercer, Mifflin, Montgomery, Montour, Indiana, Northumberland, Perry, Philadelphia, Schuylkill, Susquehanna, Washington, and York Counties—thirty societies in thirty-one counties. Owing to various causes the number has been materially reduced, and there are now registered on the Treasurer's books only twenty county societies to which any "Transactions" have been sent since 1857, namely, Beaver, Berks, Blair, Bradford, Cambria, Carbon, Chester, Huntingdon, Indiana, Lancaster, Lebanon, Lehigh, Mercer, Montgomery, Perry, Philadelphia, Schuylkill, Susquehanna, Susquehanna Union—embracing Columbia and Montour Counties—and Washington County. Small as the number now is, it will have to be reduced by the omission of three or four feeble and non-paying county societies in the distribution for the present year, unless active measures be taken to rouse the dormant spirit of medical organization.

It was referred to a committee composed of Messrs. H. Corson, N. L. Hatfield, and Geo. F. Horton; and they afterward reported that they had examined the report and found it correct.

The Committee on Publication reported that they had printed an edition of 650 copies of the Transactions of the session of June, 1860, and 270 copies of the accompanying letter, prepared according to a resolution of the Society at its last session, at a cost of $340 85. The Transactions were distributed as follows: To county societies, 480 copies; to medical societies and journals, 30; and, with the letter, in thirty counties in which there were no county medical societies; remaining on hand, 79. One or more copies of the letter were sent to prominent physicians throughout the State. The committee regret that, from the impossibility of procuring the names of reliable regular physicians in the remaining counties, the resolutions of the last session, on the distribution of the Transactions and a circular letter in counties where no medical societies exist, have not been as fully carried out as the committee could have desired.

Drs. L. Curtis, I. Remington, W. B. Atkinson, R. P. Thomas, J. Henry Smaltz, and J. Carson composed the committee.

The report was accepted, and ordered to be entered on the minutes.

On motion of Dr. Condie, a committee, composed of Doctors Condie, of Philadelphia, Murphy, of Chester, and Mair, of Luzerne, were appointed to examine the minutes of last session, and report all items of unfinished or deferred business.

A Nominating Committee, composed of one from each county represented—the member to be named by the respective delegations—to select officers for the ensuing year, was appointed.

The Society then adjourned till four o'clock.

Afternoon Session.

The Committee on the Minutes of the Session of 1860 now reported.

The Committee on Vaccine Matter reported that it is advisable to vaccinate at all periods of the year, though the extremes of both heat and cold should be avoided. Both these extremes should be eschewed. In using the matter, that from perfectly healthy subjects alone should be taken. If taken from a subject in whose system existed any scrofulous or hereditary disease, the results would be pernicious. When the matter is scarce, or cannot be procured, it may readily be obtained by inoculating young cows; but in the performance of the operation great care must be exercised. Unless fully understood, it should not be undertaken. During the past year the committee have distributed a large quantity of vaccine matter among country practitioners, and have made arrangements to keep up a full supply.

A resolution was offered congratulatory to the State Medical Society of New Jersey for its endeavors to diffuse a general knowledge of pathology within its limits, and Dr. Cooper, the commissioner from that Society, was invited to a seat among the members of the Society.

The committee appointed to consider the expediency of admitting the pupils of the Fellows of county societies to seats as auditors at their medical discussions reported favorably, and recommended the adoption of the following resolution:—

Resolved, That permission be granted to county societies to admit bona fide office students of the members to the meetings of said societies as auditors, and that we heartily approve of such admission whenever the said shall be considered practicable by the said societies.

Reports from County Societies being now called for, that from Beaver County was read. The report, besides the usual generalities, states that in the county for the last year rubeola (measles) has been extremely prevalent, and in some neighborhoods has assumed almost the form of an epidemic.

Dr. Condie said that he had seen a great deal of this form of disease, and a great many forms of it that were called measles, when in reality it was only allied to it. Every case of eruption attended with catarrh has been set down as measles. In the opinion of Dr. Condie true measles were not more prevalent now than at any other time.

Dr. Darrach said he had seen cases where measles occurred a second time. In this case, however, the disease took much of the form of

influenza, just as jaundice followed liver complaint. He cited a case were this occurred in an entire family. Properly called measles do not come a second time, just as scarlet fever does not come a second time. But a terrible disease having shaken the system, the weak point that is left is the one assailed by recurring disease, assuming the forms of the one that is gone. This is the character of second rubeola or second scarlet fever, both of which are attended with the same capillary congestion.

The report from Beaver County was then referred to the Printing Committee.

A call for the report from Bucks disclosed the singular fact that Bucks County had no medical society, the profession in that county not thinking it worth while to form such an organization.

From Bradford County the delegates stated that no mortuary tables had been kept. Hereafter, however, they would do so. As to the prevalent diseases, but three physicians had furnished data. There was nothing worth noting out of the general state of things, except that diphtheria, in parts of the county, had made its first appearance, and that dysentery had also assumed an epidemic form. Dr. Allen reported one case of amputation of the hip-joint, a highly interesting case. In Bradford fevers last but a very brief period. Four days is the longest limit. The average is about seventy-two hours. The peculiarity is remarkable. As to the diphtheria, if it be really an independent disease, it has not been severe. It is regarded in the county as a blood disease. Many throat affections are so called that are not diphtheria. The entire mortality is but four per cent. The case of amputation of hip-joint by Dr. Allen was for dry mortification, and was entirely successful.

The Society do not consider diphtheria as contagious. It readily yields to proper treatment. Ten fatal cases have been reported.

The report of Bradford County Society was referred to the Printing Committee.

Chester County Medical Society was called, but no report was forthcoming, the statistics not being made up. Several biographical sketches of deceased members, however, were handed in for publication in the annual report.

From Huntingdon County there was no response, save from a delegate, who stated that the Huntingdon County Medical Society had not met for several years. It would have met this year, but the national troubles prevented, a number of the most valuable physicians of the county having accepted positions in the army. There is no public registration of deaths, and consequently no mortuary report. The principal diseases, on account of the elevation of the country, are of the congestive type. From the experience of the delegate, the number of deaths was about two per cent. Typhoid fever was the most prevalent and fatal disease, as is the case in hilly and elevated countries. No epidemic has existed but hooping-cough and measles. Scarce a house escaped the visitation of one or the other. No adult death is reported from either, but in many cases of children the one has followed the other. Fever and ague and remittents have been prevalent. Dysentery has been troublesome and malignant in its form. While the canal and railroad were being built ague was very prevalent, and then it disappeard entirely.

Dr. Emerson said that this was just the case upon the Schuylkill. Until the little steamers were put upon the Schuylkill, setting the water in motion, ague was very bad all along the stream.

The Huntingdon County delegate said that the circumstances attending the ague in his district were interesting. At first the canal was made, and during this time the ague and fever was continuous and very severe. It then ceased, when the railroad was commenced right beside the canal. With the second excavation of earth the ague and fever returned. For five years it proved a scourge, and then ceased altogether. It was caused by upturning the subsoil to the air, into which passed the miasma that produces the disease.

"Is there steam on the canal?" was asked by a delegate.

"No," was the reply.

"Steam upon the canal," said a delegate, "would have abated the whole evil. By keeping the water in motion the miasma would not have been produced."

The delegate from Huntingdon said he could go even farther than this. He was satisfied that the motion of the cars, when the road was in operation, had a like effect in creating currents of air, and dispelling the noxious exhalations from the recently dug soil.

Lancaster County not being represented by a delegation, no report was presented.

A delegate from the county, Dr. J. L. Atlee, said that to his great surprise, some time ago, while he was absent, a resolution was passed against representation in this Society. It is the first time such a state of things has existed, and, the doctor hoped, it would be the last. The resolution was passed at a special meeting called for another purpose, and was altogether out of order.

From Luzerne, a delegate in response said he was only a volunteer, as the Society had not made any report or sent any delegation. He hoped better things, however, in the future.

Adjourned.

(*Concluded next week.*)

The North Eastern Dispensary has been lately organized in New York. It is situated at the corner of Lexington Avenue and 51st Street. In a part of the building several patriotic and benevolent women have opened a Home for returning sick and wounded soldiers. Beds to the number of 140 have been provided by Government, and 70 patients were last week accommodated.

EDITORIAL DEPARTMENT.

PERISCOPE.

Weekly Summary of American Medical Journalism.

By O. C. Gibbs, M.D.

TREATMENT OF DYSENTERY.

In the *American Medical Journal of the Medical Sciences*, Dr. J. F. Hammond, Surgeon U. S. A., gives a brief account of dysentery, as it occurred at Fort Jefferson, Tortugas, Florida. We have only space to refer to his treatment:—

"The patient is first well washed in a sea bath. Then he takes an emetic of ipecacuanha. When the vomiting has ceased, he is given a scruple of calomel, and, eight hours after the latter, half an ounce of castor oil is administered. Should he, in the mean time, desire to eat, he is allowed boiled arrow-root, and if thirsty, he drinks a mucilage. At the end of the first twenty-four hours he is very much improved. The treatment the second day is commenced with a general cold bath. Hope's mixture is then given, or mist. camphoræ, f℥ivss; liq. ammo. acet. f℥iij; spts. æther. nit. f℥iij; potass. nit. ℈ij; syrupi limonis, f℥ij. Fiat mist. cujus capiat cochlearia, ij; larga, quarta quaque hora, which is continued until the stools are feculent, or are changed from mucous to serous. This requires from twenty-four to forty-eight hours. Then ℞.—Cretæ præp. ℥j; saponis, pulv. rhei, āā 3j; hydrarg. cum creta, ℈ij; olei anis. gtt. v; sacch. alb. ℥ss; tere bene simul. capiat 3ss ad 3j ter die. The general cold bath daily and the arrow-root and mucilage are continued throughout the active treatment of the disease, and care is taken that the patient is not exposed to a current of air. If there is tenesmus after the first twenty-four hours from the commencement of the treatment, an enema of tinc. opii, gtt. xxv, mucilage, f℥j is given, and repeated every hour, until it is relieved. Should there be tenderness on pressure in any part of the abdomen, cups, scarifying, are applied on the part, and repeated, if necessary; if the case is prolonged without tenderness, the abdomen is covered with dry cups daily, or by a mustard cataplasm of ground mustard and water, applied next to the skin for forty-five minutes, once or twice daily. If the case is obstinate, and there is much tenesmus, an enema of four grains of nitrate of silver, in two ounces of mucilage, increased to four grains to the ounce, is given daily."

With our mode of treating dysentery, as it occurs in this locality, our readers are quite familiar. Under the treatment which we have adopted for the last five years, the blood and mucous discharges cease in from twenty-four to forty-eight hours, and the evacuations become fecal; pain and tenesmus cease, and the patient is convalescent in two or three days.

TAKING COLD, ETC.

In Dr. Ware's tenth lecture upon General Therapeutics, concluded in the *Boston Medical and Surgical Journal* for January 30th, remarks are made upon the abstraction of heat from the body, "taking cold," etc. Dr. Ware refers to the solicitude of many in avoiding exposure by which colds are taken, and remarks, very justly, we think, that

"The greatest error, perhaps, on this point, arises from the disposition to substitute external warmth by artificial heat, and the exclusion of air and confinement within doors, for adequate clothing. The effect of this error is to deprive patients with chronic diseases, and even persons with simply feeble health, of the invigorating influence of external air. Bad and variable as our climate is, there are few individuals who may not, by the careful and gradual cultivation of the habit, acquire the power of going abroad at all seasons, and almost all weathers, not only without danger, but with positive benefit. More persons induce imperfect health by the habits of seclusion engendered by the *fear* of taking cold, than are actually injured *by* taking cold. No doubt an artificial state of the system in this particular is produced in many persons, and no sudden change of habit would be safe."

Our experience justifies, and we have long entertained opinions as above. Those persons who are the most particular to observe all cautions against taking cold, by keeping indoors, except on warm and sunny days, are by far the more likely to suffer from colds than those who have more energy and boldness in exposing themselves. The rose-bush reared in the open air will flourish and bloom in its perfection of beauty. A similar one reared in a blinded and curtained sitting-room or parlor, if carried into the open air, will wilt when the sun looks brightly upon it, or shiver and die at the touch of the first white frost. Almost everybody supposes that winters are particularly unfavorable for consumptive invalids. This should not be so. The tonic influence of cold, its power to increase the appetite, and the function of assimilation, should increase the strength, and add vigor to the nervous system. Besides, the greater density of the atmosphere should enable the lungs, in their diseased condition, causing diminished availability, to do their required labor and perform their requisite

functions easier and better than in summer, when the atmosphere, per cubic foot, from its rarity, contains far less oxygen. If the consumptive patient has too little energy to expose himself to the winter's cold, or is too timid to let the lungs feel the influences of the dense and pure air, and shuts himself up in the tight, artificially warmed room, where even the rarified atmosphere is impure, then are winters peculiarly trying to consumptive patients.

OBSTINATE VOMITING IN PREGNANCY.

Before the Union Medical Society at Knightstown, Indiana, Dr. Canaday reported another very obstinate case of vomiting in the early months of pregnancy, which he subdued with an infusion of swamp dogwood and wild yam, (*carnus sericea* and *dioscarea villosa*).

IPECACUANHA IN DIARRHŒA AND DYSENTERY.

In the *San Francisco Medical Press* for January, our friend, Professor E. S. Cooper, makes the following remark:—

"We have seen a grain or two of ipecac., with the same amount of ext. of gentian, every two hours, act almost like a charm in chronic dysentery, where all other remedies have failed." * * * "The treatment of two diseases, apparently so different as acute dysentery and chronic diarrhœa, with the same remedy, might strike the fastidious nosologist as ridiculous, but experience has taught us that such is the case, and that ipecacuanha is that remedy."

In the *London Lancet* for July 31 and Aug. 14, 1858, Dr. E. S. Docker spoke very highly of ipecac., in large doses, in the treatment of dysentery. His doses ranged from ten to ninety grains. In order to make the stomach tolerate such doses, he says:—

"In the first place, a sinapism is applied over the region of the stomach, and simultaneously a draught given containing a drachm of laudanum. Half an hour after, when the sensibility of the stomach has been, by the action of the opium and counter-irritant, as much as possible diminished, and the patient's attention is occupied with the sinapism, or by conversation, the ipecacuanha is administered."

In regard to the result of such treatment, he says:—

"Out of upwards of fifty cases of dysentery, I lost *but one*, (in former years the mortality ranged from ten to eighteen per cent.;) and in the instance in question death was caused by abscess in the liver: the primary disease had been not only cured, but very thoroughly cured, as I shall hereafter show." * * * "The action of these large doses is certain, speedy, and complete; and truly surprising are sometimes their effects." * * * "The evacuations, from being of the worst kind seen in dysentery, have not gradually, not by any degrees, however rapid, changed for the better; *they have ceased at once, completely*. There has been no *inclination* even to stool for twenty-four or thirty-six hours, the patient all the time in a state of delightful ease and freedom from pain; then at last, without aid of any kind, a perfectly natural, healthy evacuation, all irritation, pain, and tenesmus having, at the same time, entirely ceased."

In the cures thus effected, Dr. Docker says there is no disposition to relax.

In the treatment of dysentery, formerly we were in the habit of using ipecac. in small doses; but we must confess the result was anything but satisfactory. We have never tried the large doses recommended by Dr. Docker, of London. Before that paper came to our notice, we had commenced the treatment of dysentery with other and then unusual remedies, with results so perfectly surprising and satisfactory that we had no disposition to change. Our treatment has been so often given in detail that we deem it improper to occupy space with it here.

REMOVAL OF THE CLITORIS IN CASES OF MASTURBATION.

In the *San Francisco Medical Press* for January, Prof. E. S. Cooper reports two cases of masturbation in females—incurable by the ordinary means—that were cured by the removal of the clitoris. Prof. Cooper says:—

"In the female, it would appear, judging from the results of two cases, as though we have found a remedy by surgical interference, and of such mildness and simplicity as to commend it to an early trial in all cases where the habit of masturbation threatens injury to the intellect. It consists in removing the entire clitoris, including the corpus cavernosum clitoridis and the major portion of the erectores clitoridis."

In the cases reported, the following describes the operation:—

"The operation consisted in grasping the clitoris, back of the glans, with a pair of forceps, drawing it forward, so as to place the erectores clitoridis and corpus spongiosum upon the stretch, when the whole mass was cut away by the scalpel, with small portions of the nymphæ. Very little hemorrhage occurred, and the patient was quite comfortable the next day, though very melancholy, and recovered without an untoward

symptom. The operation was successful in breaking up the practice, and the patient has very much improved in the mental faculties, all save the memory, which appeared to be almost entirely destroyed."

Prof. Cooper concludes thus:—

"After these results, I think a surgeon should not only remove the clitoris in all similar cases, but if this should prove insufficient to effect a cure, he should remove the entire nymphæ also, as they are very vascular, and possess erectile tissue of great sensibility, and are said to be the parts often titillated in masturbation.

"What effect will these operations have upon the person in the married state? These parts are supposed by many physiologists to have much influence over sensual gratification. Some regard them, in fact, as the seat of venereal pleasure.

"Practically, this matter does not come up in those desperate cases in which a destruction of the mental faculties is rapidly going on, and there is no other known way of curing the patient. But, in a physiological point of view, it is a subject of great interest."

CREOSOTE IN THE TREATMENT OF LUPUS, ETC.

In the *Chicago Medical Journal* for January, Dr. H. V. Passage has an article upon some of the external uses of creosote. He reports a case of *lupus exedens*, of three years' standing, and in which the septum of the nose was destroyed up to the vomer, that was cured in two months by the use of the creosote.

He also reports a severe case of hemorrhoides of nine years' standing, that was cured in three months by the application of an ointment composed of creosote and lard, equal parts.

Dr. Passage says, also, that he has cured chancres with the creosote that refused to yield to the lunar caustic. He concludes thus:—

"I have used the creosote in a case of chancre on the external portion of the prepuce, and it was entirely destroyed in seven days.

"I am using the creosote in two cases of more importance than any of those related, and I will report as soon as I obtain the results."

CONSTIPATION.

Before the Chicago Medical Society, as per report in the *Medical Examiner* for January, the subject of constipation and its treatment was had under discussion. The different remedies proposed by the members present are matters of interest, not only in a practical point of view, but as showing what a variety and dissimilarity of means different physicians employ to secure the same ends.

Dr. G. Paoli's usual prescription was strychnia. Of a solution, one grain to the ounce, he gives from five to ten drops twice a day.

Dr. Hatch relies mainly upon a cold infusion of hydrastis canadensis.

Dr. Wait uses a pill composed of blue mass, two grains; ipecac. two grains; and aloes, one grain, to be given every night until a healthy action is established; but never to produce a cathartic effect.

Dr. Hinkley gives black mustard seed in doses of a teaspoonful daily.

Dr. Davis regards the following as among the best remedies to restore a healthy peristaltic action:—

"℞.—Ext. hyoscyamus, gr. xxx;
Ferri sulph. gr. xxx;
Pulv. aloe, gr. x;
Ext. nucis vom. gr. x.

"Mix and divide into 30 pills, one of which may be given before each meal."

In chlorotic females and anæmic persons, he advises the following:—

"℞.—Ferri citras, ʒj;
Strychnia, gr. j.

"Mix and divide into 30 pills, one of which is to be taken before each meal."

In cases of constipation, there is no one remedy or combination of remedies that will meet all cases. In very many cases, we have found strychnine to answer our purpose most admirably. Dr. Paoli would give from five to ten drops of a solution containing one grain to the ounce. This would give from one one-hundred and sixtieth to one-eightieth of a grain at a dose. We cannot get satisfactory results from strychnine with less than from one-twentieth to a tenth of a grain. We make a solution four grains to the ounce, and give from five to ten drops. In suitable cases it never disappoints us.

There is a class of cases in which the following will act like a charm:—

℞.—Saturated solution sulph. magnesia, f℥vij;
Aromatic sulph. acid, f℥j. M.

Dose, from a teaspoonful to a tablespoonful twice a day. The dose should be so regulated as to secure but one evacuation daily. In cases accompanied with debility, the sulphate of iron may be added to the mixture with advantage. The above combination has a wide range of ap-

plication, and we have faith to believe will favorably disappoint many who may be induced to put it on trial.

Many object to taking medicine daily for constipation. But if the remedy is well chosen, no hurt but positive advantage results. It is far better to secure one movement daily, with the regular administration of a remedy, than to take physic at more remote intervals. In fact, injury nearly always results from the latter method of obviating costiveness.

THE MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SATURDAY, JUNE 14, 1862.

VOLUNTEER DELEGATIONS OF SURGEONS AT THE SEAT OF WAR.

A number of the loyal States have, through authority of their respective Governors or Surgeon-Generals, appointed volunteer delegations of surgeons, and dispatched them to the seat of war. The late battles have brought into requisition the services of most of these surgeons, and we begin to receive reports of their proceedings. It is evident that the efficiency of these delegations will depend on the manner in which they happen to be provided for the service, and, owing to deficiency in this respect, some of the delegations have not been able to accomplish their objects in a satisfactory manner.

The official report of Dr. Wm. O'Gorman, Chief of the Commission of Surgeons sent to Yorktown from New Jersey, has been placed in our hands. Though prevented in a great measure from accomplishing the main object of their mission, viz., that of bringing home the New Jersey wounded troops, they yet had the satisfaction of administering to the wants of many wounded soldiers of both armies. The Commission pay a high compliment to the Sanitary Commission, and characterize it as "admirably organized," working most efficiently, "subject to no State or government control," acting with "a broad humanity, and doing good work which will not soon be forgotten." The Sanitary Commission has several ocean-going steamers in its service, and has transported nearly 2000 wounded to New York. The New Jersey Commission attribute their failure to accomplish their mission "to the opposition of the medical department of the army," and suggest probably one of the reasons for the failure of the department to cooperate with them, viz., that "State interference" in the duties which that department was created to perform is considered "unnecessary and embarrassing," and that "benevolent provision made by our State for its citizen soldiers is an injury and injustice to the soldiers of other States, who are not similarly watched over."

While, therefore, the medical department did not assign the New Jersey Commission any particular post of duty or particularly further their object, they were more cordially seconded in their movements by the Sanitary Commission, so that their mission was not wholly a failure.

We recently foretold what has since occurred in regard to the volunteer commissions of surgeons, from several of the States, who have presented themselves for service in the army on the peninsula near Richmond. With the most humane designs in view, and with the disposition to give their time and labor for their suffering countrymen, their objects have been thwarted by want of proper authority and financial resources which should have been systematically pre-arranged at home before the starting of the commissions.

The object of some of these commissions was merely confined to the care and bringing home of the wounded of their respective States; yet without pecuniary means of State contribution for its accomplishment, and without conference with the regular army medical department, they presented themselves at the scene of conflict. When arrived there they found themselves in an awkward position, without any status or authority, under no official direction, and dependent for even their subsistence on the courtesy of the regular medical officers. The exigencies of war, and the occurrence of great battles in which the number of wounded was very large, have, it is true, rendered useful the services of some of the members of these unprovided commissions; but their missions have, in the main, been failures. The failures have been in part owing to a want of State provision, and to want of a proper understanding of their positions by the Surgeon-Generals of States or those who have had the direction of the commissions. The Surgeon-General of the army and the Medical Directors have certainly not thrown any impediments in the way of well-directed efforts of State delegations to assist them in the care and transportation of the wounded; but when such delegations make demands for steamboats and supplies for the exclusive use of the wounded from their own States,

they may be asking for more than the medical officials have power to grant.

If these commissions, unprovided as they were, had offered their services in aid of the regular army medical department, we believe that they would have been accepted, and been found useful during the great demands for medical aid that have followed recent battles. If in the same manner, their services had been offered to the Sanitary Commission, as were finally the services of the New Jersey delegation, they would speedily have been made effective.

The delegation from Pennsylvania proceeded to the seat of war, fully provided with financial resources, hospital stores, nurses, etc., and, with complete means to act in an independent capacity; yet the expedition, instead of asking aid from the officials or from the Sanitary Commission, was offered as an adjuvant to the regular medical department of the army, and has been a blessing to great numbers of wounded, not only Pennsylvanians, but those from other States.

Dr. O'Gorman says, in closing his report, that—

"In reviewing our action from the time we left the State, I connot perceive that we, provided as we were, could have acted differently than we did. Nearly all the seaboard States were represented at the seat of war by medical delegations; but none except Pennsylvania left home fully prepared to take charge of their wounded. And no State, except the one I have named, succeeded in carrying home large numbers of their wounded soldiers."

We believe that the efficiency of the medical delegation from Pennsylvania has been due to the untiring devotion of Dr. Henry H. Smith, the Surgeon-General. The expedition was admirably organized and completely provided for service on the battle-field, for bringing the wounded to their homes, and for the preservation of the bodies of the dead. The manner in which this difficult service has been accomplished is a credit to Surgeon-General Smith, and reflects honor on the State, which is admitted to be in advance of all others in accomplishing the humane and patriotic object of taking care of her wounded soldiers.

Two wards in the Jews' Hospital, 28th Street, New York, have been taken by Government and provided with accommodations for invalid soldiers. The wards are very spacious, and the beds are far apart, each having a table and a sick-chair.

EDITORIAL NOTES AND COMMENTS.

More Surgeons Wanted.—On the 11th instant, the bill providing for the addition of forty surgeons and one hundred and twenty assistant surgeons for the volunteer service was taken up and passed. We copy a portion of the debate on the bill. Mr. Wilson, of Massachusetts, in urging its immediate passage, said:—

"There was great need for additional surgical aid in the army. He had understood that some of the men wounded at the battle before Richmond did not have their wounds dressed for the first time till last Saturday.

"Mr. Clark (N. H.) asked why numbers of our men in the hospitals had not been discharged when they were not fit for the service.

"Mr. Grimes (Iowa) said it was not the fault of Congress; they passed an act so long ago as April for the appointment of inspectors for the very purpose, but these men have not all been appointed. The medical department of the army ought to have seen to this matter.

"Mr. Foster (Conn.) said there had been great mismanagement in the appointment of surgeons. Many of the surgeons were utterly unfit for their duties. At the battle of Winchester, many wounded men lay for eight or nine days without having their wounds dressed, and were buried in the clothes they were wounded in. If the Committee on the Conduct of the War examine this case, they will find that not all the cruelties are practiced by the rebels. There were men who had their legs amputated, and while they laid on the floor in agony, were told to get up and go out by the surgeons; and when the poor men said they could not go because they had no legs, they had been kicked by the surgeons, or men connected with what is called the medical department of the army. Such facts occurred after the battle of Winchester. There were at least fifteen thousand men in the hospitals now who ought to be discharged; there were men sent to the hospitals so carelessly that not even their names were sent with them, and such men have died and been buried as unknown, leaving years of suspense to their families.

"Mr. Wilson said the Government had done all they could to get the proper returns by sending all the necessary blanks, but company officers had neglected their duty, and were careless."

In addition to the fact mentioned in the last paragraph of Senator Foster's remarks, we learn that there are some men in the hospitals of this city who would have been discharged long since only for want of slight formality in the papers connected with their enlistment. To charge the medical department of the army, therefore, with dereliction of duty in all cases where early discharges are not made, is grossly unjust. That

department has a Herculean task to perform, and the marvel is that in the multiplicity of its labors its duties have been so well performed.

Medical Department of the Army.—The Surgeon-General is devoting his whole energies to the duties of his responsible position. A few days since a report was made to the Secretary of War against the present system adopted by States in taking charge of their own wounded. The effect of this system is to deprive the Surgeon-General of the control of United States sick soldiers, and to render impossible the procuring of pensions and bounties by the relatives of deceased soldiers, there being no United States officer to give the certificate as required by law. The plan, though instituted with the best motives, in other respects is impracticable, and detrimental alike to the interests of the service and the welfare of the patients. It is proposed, therefore, to negotiate with the States for the transfer to the United States of all the hospitals provided by State authorities, together with the medical officers attached thereto, the former paying all expenses hitherto incurred. This plan is the only one, it is believed, which will insure that regularity and efficiency so necessary in the management of all the affairs of the department. In accordance with this, we observe that Governor Curtin, of this State, has instructed Surgeon-General Smith to transfer the hospitals in this State to the United States authorities.

The Wounded from the late Battles.—During the last week a large number of those who were wounded in the battle at the Chickahominy and at Fair Oaks have arrived in this city, and been distributed among the various military hospitals.

The steamer *Whilldin* arrived on Tuesday evening, June 3d, and on Wednesday those on board were conveyed on stretchers and in furniture cars to St. Joseph's Hospital, where they are well provided for. The Whilldin went from Fortress Monroe up the York River and Pamunkey to White House, where the wounded were received direct from the battle-field, occupying some sixteen hours in bringing them on board. In addition to Surgeon-General Smith, Surgeons Bishop, Nebinger, and Hodge, together with Assistant-Surgeons Campbell and Bartine, made up the delegation from this city.

Among the curiosities of the wounds received, we notice that of Captain Eli Dougherty, Company K, 93d Regiment, who was wounded in the breast. A Minié ball struck him in the clothes over his heart. It went through his coat, vest, and shirt. It smashed a gold watch (which he had bought for his sister) all to pieces. The ball then went into a Bible and dug its way through the lid and through about six hundred pages. At the beginning of the 4th chapter of 2d Timothy it went out of the Bible and inflicted a slight wound in his breast. It left its last mark on the first verse of that chapter. It is as follows:—

"I charge *thee* therefore before God, and the Lord Jesus Christ, who shall judge the quick and the dead at his appearing and his kingdom."

The Bible is so disfigured that it will only be valuable as a relic. It was given to the captain by a lady.

The wounded brought by this arrival were, with one or two exceptions only, Pennsylvanians.

On Sunday, June 8th, the steamer S. R. Spaulding arrived also from White House, which place she left early on Friday morning. The wounded were brought from the battle-field by railroad, and were indiscriminately from all the regiments engaged in the battle. About 4 P.M. the disembarkation commenced under the superintendence of Assistant-Surgeon Dunglison. The most aggravated cases were conveyed to the Hospital Fifth and Buttonwood, the remainder were dispatched in furniture and express cars to other hospitals. On the trip they received every possible attention. The decks of the vessels were fitted up with rough berths, sufficiently commodious for all practical purposes.

Large numbers of the wounded have also been conveyed to the Marine Hospital at Portsmouth, and others to New York. The policy of conveying the wounded away from the immediate vicinity of the battle-field, and to a more genial climate, is most assuredly a good one, as, in most instances, it undoubtedly renders speedy recovery more probable. Still if this policy should lead to any lack of medical and surgical attendance upon the battle-field or on board the vessels appointed for their conveyance, it would not only be disgraceful but disastrous. It is indeed stated, as a fact, that the second "load of helpless men" taken to Fortress Monroe *had lain without any surgical attendance from Saturday's and Sunday's battles until they were put aboard the boat on Thursday, five days elapsing before their wounds were dressed;* and that many of these poor, neglected, brave-hearted fellows, who braved

death in defense of the Union, were *actually food for maggots when they reached White House, the revolting worms having already appeared in the wounds.* For the sake of humanity—for the sake of these heroic men who endure so much without complaining—for the sake of their wives and children, and for the honor of our country, let not such apparently wanton neglect again disgrace the battle-fields of the Union.

Surgeons Released.—We are pleased to record the fact that Dr. Mitchell, of the First Maryland Regiment, and Dr. Stone, of the Second Massachusetts, who were taken prisoners at the battle of Front Royal, were unconditionally released by the Confederates, with instructions to report to Secretary Stanton. In consequence of this act on the part of the Confederates, the Secretary ordered the release, on the same terms, of all the Confederate surgeons now prisoners with us. No fact connected with this unnatural war has given us more pleasure to record than this emphatic recognition, by both opposing forces, of the sacred character of the surgeon.

Elixir of Bark and Iron.—The *Buffalo Medical and Surgical Journal* gives the following formula for the preparation of this remedy, which it regards as the most pleasant and at the same time the most efficient and reliable compound of bark and iron yet introduced to the profession:—

℞.—Solutio. ferri protox.,	f3vj;
Ext. cort. calisaya, (cinchonia et quinia,)	3v;
Spiritus vini rect., (80 per cent.,)	f3xiv;
Syrupus simp.,	f3xx;
Tinct. cort. aurant.,	
" " limomi,	
" " cinnamom, āā	f3j;
" caryophyll,	gtt. vj.

This preparation contains in each tablespoonful about three grains of iron, and what is equivalent to one-third of a grain each of cinchonia and quinia. Half a wineglass is a medium dose for an adult, two or three times a day.

Importance of Vaccination.—Dr. W. Argyle Watson, Surgeon on board the U. S. steamer Cuyler, gives the following interesting and striking proof of the efficiency of vaccination as a preventive of small-pox, which recently came under his own observation on his ship. He says:—

"The day after we sailed from New York, one of the seamen, *who had never been vaccinated*, was taken ill with the premonitory symptoms of small-pox, which in due time ripened into a full-blown case of the confluent character, and proved fatal at the end of ten days. On the first appearance of the disease, I vaccinated all hands, (as I then supposed,) and awaited the issue with much anxiety. After the critical time had passed, I found but one victim of the contagion on my hands, and, upon investigation, ascertained the patient *had never before been vaccinated*, and when mustered with his shipmates to receive the beneficent prick of my lancet, had skulked away from prejudice against the operation, and thus deprived himself of the protection to which they owed their safety. This man now lives to exhibit the marks of his folly on a deeply scarred face, the result of a most fearful attack of small-pox.

"Such a marked instance of its protecting power cannot fail to make friends for the cause of compulsory vaccination, and to aid in doing away with the idle prejudice against its being put in force.

"I may here add that, among those protected by vaccination, there were some faint attempts at varioloid, but unattended by any more serious symptoms than a slight febrile action, pains in the loins, and a pustule or two on the face, as was the case in the person of the writer."

CORRESPONDENCE.

Army Correspondence.

Dr. S. T. Thorn, one of the surgeons from Ohio who volunteered to attend the wounded upon the battle-field of Pittsburg Landing or Shiloh, writes us as follows. He says:—

I have just returned from Pittsburg Landing, where our services were much needed. Your remarks about the unnecessary delay and neglect in the care of the sick and wounded are very proper,—neglect on the part of the government, not by the profession; for men never worked harder and more faithfully than the surgeons on the fields at Pittsburg and Shiloh. There should have been at least two hundred surgeons detailed for that especial field. The government had warning enough, and material enough had volunteered. Ohio now has a large force upon the spot ready for emergencies. The prevailing diseases are diarrhœa, fevers, (all dubbed typhus,) and pneumonia.

In number for April 12th, Dr. Bulkley has laid down his manner of treating intermittent fever at New York Hospital. A preparatory course and small doses of quinine may be necessary

there; but upon the Maumee, (where remittent and intermittent formerly prevailed to a great extent,) we find that the immediate use of quinine hastens the cure. My general plan of treatment is to commence with

℞.—Quinia sulph. gr. xxx;
Tr. ferri chloridi, ℥j;
Syrup simp., ℥ij.
M. ft. solut.

S.—One tablespoonful every three hours during remission, beginning with sweating stage.

The above prescription is almost always accompanied by one for twenty compound chinoidine pills, which I have ordered made by the different apothecaries as follows:—

℞.—Chinoidine, ℥j;
Massa hydrarg., ℥ss;
Piperine, 3ij.

M. ft. massa et div. in pill No. ccxl. One every night and morning until twenty are taken.

The above course put an end to the disease. The patient is not subject to a recurrence at the end of fourteen or twenty-one days; it is rare to have the patient return under a year with the same trouble.

Twenty grains of quinine in solution I think is equal to thirty in a dry state or in pills.

Biliousness (?) prevails to an alarming extent (in the minds of the people) throughout the West. They must have some antibilious pill. In such cases I make use of the compound chinoidine pill as made above. This pill, in my practice, has almost supplanted the c. c. pill of the U. S. P. In malarious regions purging is not well borne. Iron, quinia, strychnia, and arsenic are more frequently called for than other remedies, except opiates.

NEWS AND MISCELLANY.

Ingredients of Dublin Porter.—Dublin porter has been analyzed in an elaborate manner, and a statement of the results appears in the *Journal of the Royal Dublin Society*. One gallon was found to contain of fixed organic matter, 4689·70 parts; fixed inorganic matter, 297·64; alcohol, 6356·0; acetic acid, 252·0; sugar, 120·50; albumen, 552·0; extractive matter, 4017·30; silica, 20·30; phosphate of magnesia, 59·71; phosphate of lime, 11·06; phosphoric acid, 44·31; sulphate of potash, 42·0; potash, 83·16; chloride of sodium, 31·36; soda, 5·74.

Without expressing any opinion as to the medicinal virtues of the porter examined, the analysis draws attention to the fact that it contains a large quantity of heat-giving and flesh-forming matters, as well as the necessary inorganic constituents required in the formation of bone and flesh.—*London Paper.*

The operation of excision of the knee-joint was recently performed with success at the *Hôpital de la Sainte Famille*, in Montreal, by Dr. Hingston. This is said to be the first performance of the operation in Canada.

Buffalo Physicians in the Government Service.—U. S. Army: Dr. Chas. K. Winne, Ass't Surg., Clarksburg, Va. Volunteers: Dr. Chas. H. Wilcox, Brigade Surg., Genl. Patrick's Brigade, (resigned, and is again Surgeon 21st Regt. N. Y. V.); Dr. Jos. A. Peters, Ass't Surg. 21st N. Y. V.; Dr. Lucien Damainville, Surgeon 31st N. Y. V.; Dr. E. P. Gray, Surgeon 100th Regt., N. Y. V.: Dr. E. L. Bissell, Ass't Surgeon 44th N. Y. V.; Dr. J. W. Casey, Ass't Surgeon 105th N. Y. V.; Dr. Wm. H. Butler, (sick leave,) Ass't Surgeon, Mich. Volunteers; Dr. F. J. Bancroft, Ass't Surgeon Penn. Volunteers; Dr. Sylvester Rankin, Ass't Surgeon New Mexico Volunteers; Dr. S. B. Hunt, Volunteer Surgeon, Yorktown; Dr. Charles Winne, Volunteer Surgeon, Yorktown. U. S. Navy: Dr. Newton N. Bates, Ass't Surgeon, Gunboat "Seneca;" Dr. Wm. Howell, Ass't Surgeon, sick leave; Dr. S. D. Flagg, Jr., Gun-boat "Connecticut;" Dr. Wm. B. Mann, Gun-boat "Miami;" Dr. Geo. D. Slocum, Ass't Surgeon, S. Sloop "San Jacinto;" Dr. H. P. Babcock, do., waiting orders. U. S. Volunteer Navy: Dr. Ira C. Whitehead, Ass't Surgeon, Key West; Dr. Geo. L. Sweet, Ass't Surgeon, Gun-boat "Isaac Smith." With the Sanitary Commission: Dr. Horace Tupper, Pittsburg Landing; Dr. C. B. Hutchins, Pittsburg Landing.

Honorarium.—We learn that the Trustees of the New Castle County Almshouse, at their recent meeting, unanimously voted the sum of one hundred dollars to Dr. Geo. Pepper Norris, in consideration of his untiring and successful efforts in alleviating the several cases of small-pox which were sent to the Almshouse from Odessa, a few months ago.

At the annual meeting of the Hunterdon Medical Society, held at Perryville, on the 18th inst., the following officers were elected for the ensuing year: President, Dr. H. P. Nightingale; Vice-President, Dr. M. Abel; Secretary, Dr. I. S. Cramer; Treasurer, Dr. John Blane.

Dr. C. H. Allen, of the Vermont University Medical College, has been appointed Surgeon of the 9th Regiment Vermont Volunteers, now recruiting.

The Surgeons and the Sick at Winchester.—Major-General Banks, in his official report of his retreat from the Shenandoah Valley, says: "The number of sick men in the hospital at Strasburg, belonging to General Williams' Division, was one hundred and eighty-nine, one hundred and twenty-five of whom were left in the hospitals at

Winchester, under charge of Surgeon Lincoln R. Stone, 2d Massachusetts; sixty-four were left in the hospital at Strasburg, including attendants, under charge of Surgeon Gillespie, 7th Indiana, and Assistant Surgeon Porter, United States Army.

"Eight of the Surgeons in this Division voluntarily surrendered themselves to the enemy in the hospitals and on the field, for the care of the sick and wounded placed under their charge. They include, in addition to those above named, Brigade Surgeon Peale, at Winchester; Surgeon Mitchell, 1st Maryland, at Front Royal; Surgeon Adolphus, Best's Battery, U. S. A.; Surgeon Johnson, 16th Indiana, and Surgeon Francis Leland, 2d Massachusetts, on the field.

"It is seldom that men are called upon to make a greater sacrifice of comfort, health, and liberty, for the benefit of those intrusted to their charge. Services and sacrifices like these ought to entitle them to some more important recognition of their devotion to public duty than the mere historical record of the fact. The report of the Medical Director, Surgeon W. S. King, exhibits the disposition of nearly 1000 sick and disabled men left at Strasburg by Shields' Division, upon its removal to the Rappahannock Valley."

Vermont Medical College Commencement.—The Commencement exercises of the Medical Department of the University of Vermont took place on Monday evening, June 9th. After a prayer by Rev. G. B. Safford, Prof. C. L. Allen delivered an able and scholarly address, briefly tracing the progress of medicine, and vindicating its claim to high rank as a science. Prof. Thayer then read the list of graduates, and degrees were conferred with a few remarks by Prof. Torrey, acting President of the University. The class numbers 35, and is the largest graduating class by *two* which the Medical College has yet sent forth. The degrees conferred were as follows:—

M. D.: Henry G. Addy, N. S.; Theodore S. Baldwin, Mass.; Robert W. Bennett, Vt.; Orvis F. Bigelow, Vt.; William O. Boyden, Vt.; George F. Burnham, Vt.; Charles H. Carpenter, Vt.; Stephen L. Chilson, Penn.; Abraham T. Dewitt, Penn.; William F. Eddy, Vt.; Paul C. Garvin, Me.; R. Walter Hibbler, N. J.; Almer A. Hier, Vt.; Aldin M. Marshall, Vt.; Godfrey R. Martin, N. Y.; Horace Mecorney, Mass.; William F. McNutt, N. S.; Chas. A. Moulton, Vt.; Nathan R. Morse, N. H.; Isaac Farrar, Mass.; Peter Marchand, Canada East; Richard J. Williams, Vt.; David J. William Wiley, N. S.; Thomas C. Thornton, Penn; Jay W. Schooley, Canada West; Irvin W. Lyon; Frank L. Kendrick, Ohio; Allen McLean Sterling, N. B.; Joseph L. Harrington, Del.; Ira C. Windsor, Conn.; James W. Sibley, N. S.; Henry A. Kemp, N. H. Honorary Degree: Hon. Hiram Dow, New Brunswick. Ad Eundum: Job E. Macomber, Vt.; Alfred E. Bucher, Penn.

Curiosities of Military Surgery.—Dr. Wardner, Surgeon of the Twelfth Illinois Volunteers, mentions the extraction of a grape-shot, which entered the right cheek, in front of the angle of the lower jaw, knocking out the back molars, passed into and through the pharynx, opening the trachea, (so that when the man tried to drink he was strangled,) and lodged on the left side of the neck, resting upon the brachial plexus of nerves, thus causing paralysis of the left arm. The ball was removed without the loss of more than a drachm of blood.

Answers to Correspondents.

Dr. A. B. D., New Jersey.—The perchloride of iron is a common preparation among the apothecaries generally in this city. In the solid form it is very deliquescent, and unsuitable to inclose in a letter. It is mostly used as a concentrated solution, in which latter form we will send it to you, if you desire. It is more of a styptic than a caustic, and might be exactly adapted to the case you mention.

Drs. S. S., and R. S. W., Pennsylvania.—The best methods of treating an ununited fracture of the humerus of six months' standing would be—*First*, frictions of the ends of the fragments together, and rest for several weeks. *Second*, the perforation of the ends of the bones with an awl, as recommended by Dr. Brainard. *Third*, if the fracture is in the lower extremity, place a supporting band on the limb, and let the patient walk on it, as practiced by Dr. H. H. Smith. *Fourth*, introduce a seton between the fragments, excepting in fracture of the femur. *Fifth*, resect.

Vital Statistics.

OF PHILADELPHIA, for the week ending June 7, 1862.

Deaths—Males, 132; females, 114; boys, 62; girls, 62. Total, 246. Adults, 122; children, 124. Under two years of age, 72. Natives, 190; Foreign, 40. People of color, 15.

Among the causes of death, we notice—Apoplexy, 1; convulsions, 15; croup, 1; cholera infantum, 2; cholera morbus, 0; consumption, 41; diphtheria, 4; diarrhœa and dysentery, 7; dropsy of head, 2; debility, 13; scarlet fever, 6; typhus and typhoid fever, 10; inflammation of brain, 8; of bowels, 9; of lungs, 17; bronchitis, 1; congestion of brain, 6; of lungs, 1; erysipelas, 0; hooping-cough, 0; marasmus, 11; small-pox, 4.

For week ending June 8, 1861.....266
" " June 7, 1862.....246

Population of Philadelphia, by the census of 1860, 568,034. Mortality, 1 in 2309.

OF NEW YORK, for the week ending June 2, 1862.

Deaths—Males, 178; females, 162; boys, 101; girls, 90. Total, 340. Adults, 149; children, 119. Under two years of age, 125. Natives, 222; Foreign, 118; Colored, 5.

Among the causes of death, we notice—Apoplexy, 3; infantile convulsions, 14; croup, 11; diphtheria, 10; scarlet fever, 18; typhus and typhoid fevers, 6; cholera infantum, 5; cholera morbus, 0; consumption, 58; small-pox, 7; dropsy of head, 20; infantile marasmus, 17; diarrhœa and dysentery, 0; inflammation of brain, 10; of bowels, 17; of lungs, 15; bronchitis, 4; congestion of brain, 11; of lungs, 4; erysipelas, 9; hooping-cough, 2; measles, 2: 157 deaths occurred from acute disease, and 28 from violent causes.

For week ending April 8, 1861.....000
" " April 7, 1862.....000

Population of New York, by the census of 1860, 814,277. Mortality, 1 in 2395.

OF BOSTON, for the week ending May 31, 1862.

Deaths—Males, 46; females, 49. Total, 95. Natives, 75; Foreign, 15.

Among the causes of death, we notice—Phthisis, 17; cholera infantum, 1; croup, 1; scarlet fever, 10; pneumonia, 9; variola, 0; dysentery, 0; typhus fever, 2; diphtheria, 0; hooping-cough, 2; convulsions, 2.

Population of Boston in 1860, 177,902. Average corrected to increased population, 84·66.

OF PROVIDENCE, R. I., for the month of May, 1862.

Deaths—Males, 36; females, 37. Total, 73. Under two years of age, 15. Natives, 58; Foreign, 15; Colored, 3.

Among the causes of death we notice—Burns and scalds, 3; brain, congestion of, 1; brain, disease of, 2; bronchitis, 1; cancer, 2; childbirth, 1; consumption, 13; convulsions, 3; croup, 4; debility, 1; dropsy, 3; dropsy of chest, 1; dysentery, 1; diabetes, 1; enteritis, 2; heart, disease of, 6; hydrocephalus, 2; hernia, 1; intemperance, 1; marasmus, 1; old age, 4; paralysis, 1; peritonitis, 2; pneumonia, 4; congestion of lungs, 1; pleurisy, 1; scarlatina, 4.

The population of Providence in 1860 was 50,666, which gives one death in 694 for the whole month.